Aviation Weather Roadmaps

Presentation to NASA ICNS Conference

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Agenda

- Background
- Aviation Weather Technology Transfer
- What Led to Development of Roadmaps
- What are the Roadmaps and their Structure
- Thunderstorm Roadmap
- In-Flight Icing Roadmap
- Outlook

Background

- FAA spends roughly $20 Million per year on Aviation Weather R&D
- R&D efforts are maturing rapidly in recent years
- Challenge: What is the most efficient way to graduate R&D results into operations?
  - Ensure adequate funding beyond R&D phase
  - Identify and resolve regulatory compliance issues
  - Ensure accessibility by all users
  - Inform all users of changes in products and services and ensure their needs are adequately addressed

Aviation Weather Technology Transfer

- **A process by which FAA/NWS can effectively manage and accelerate the technology transfer from weather R&D to operational production and operation**
- **A management review/decision making process model superimposed on aviation weather R&D life-cycle from inception to completion of technology transfer**
- **A set of decision criteria applied successively at various stages of the technology transfer life cycle**
  - Incrementally increase the level of precision (i.e., qualitative to quantitative)
  - Incorporate proactive budget planning
- **A means to communicate with industry and users**

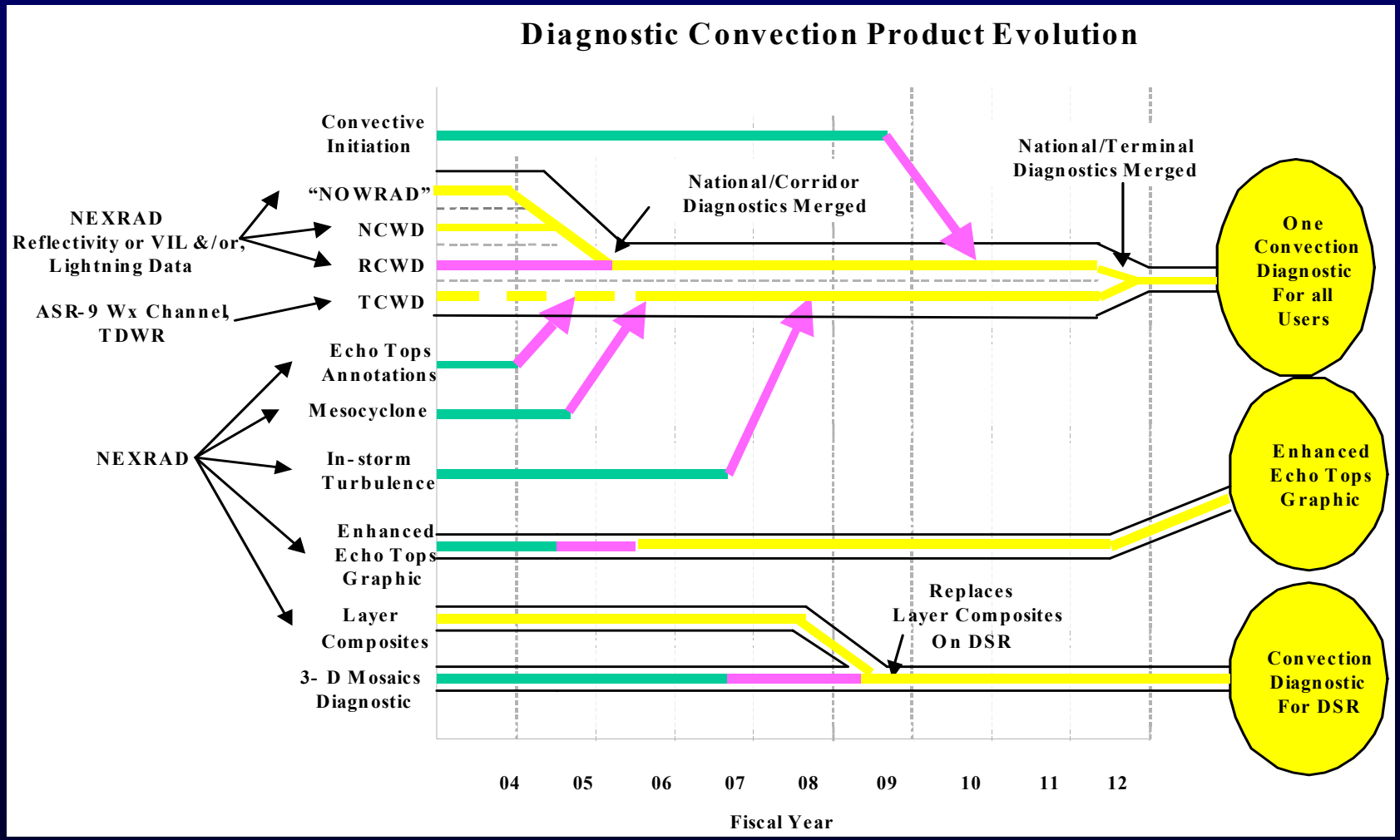
What led to Development of Roadmaps

- Users concerns have been:
  - Present development process yields a patchwork of multiple, overlapping, and potentially inconsistent products
  - Products are introduced without consideration of regulatory impact
- Concerns about product proliferation and regulatory impact are systemic and call for a *roadmap*

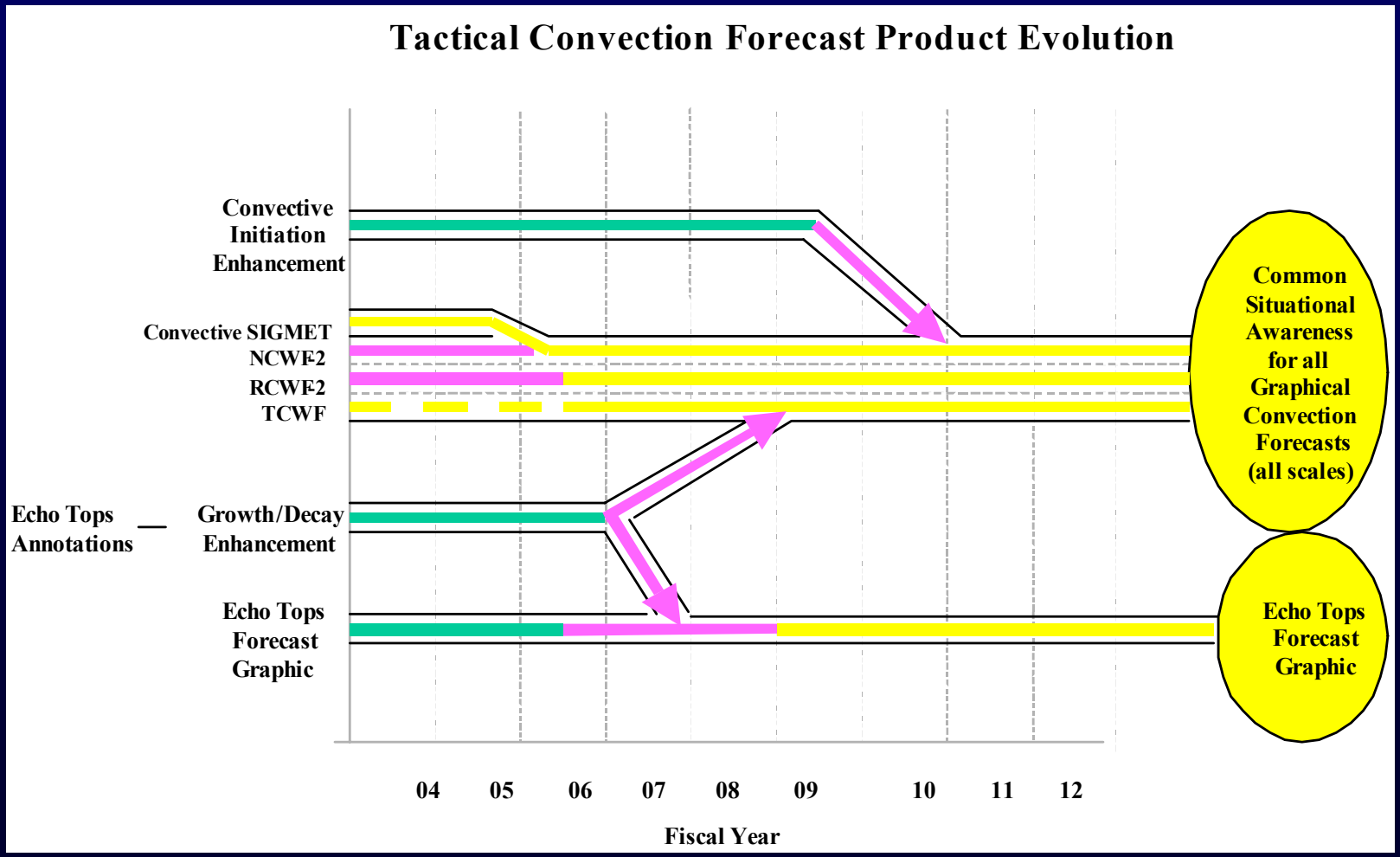
What are the *Roadmaps* and their Structure

- High-level blueprint of the evolution of weather products and services in the NAS resulting from the transfer of maturing R&D products into operational use
- Aviation Weather *Domain*-based
  - Ten volumes (Introduction plus nine separate volumes corresponding to a weather domain, e.g., thunderstorm, in-flight icing,etc.)

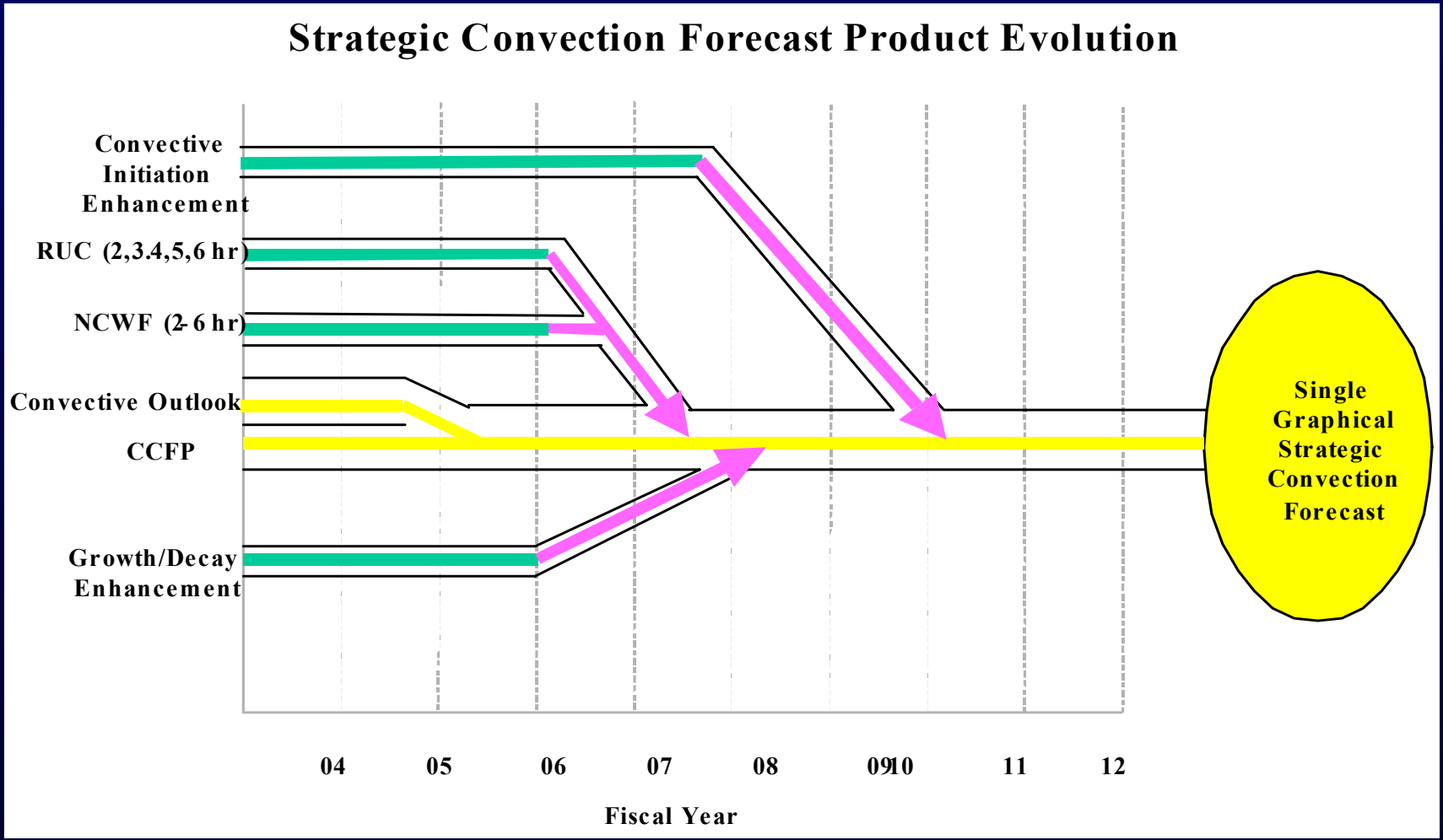
Thunderstorm Roadmap



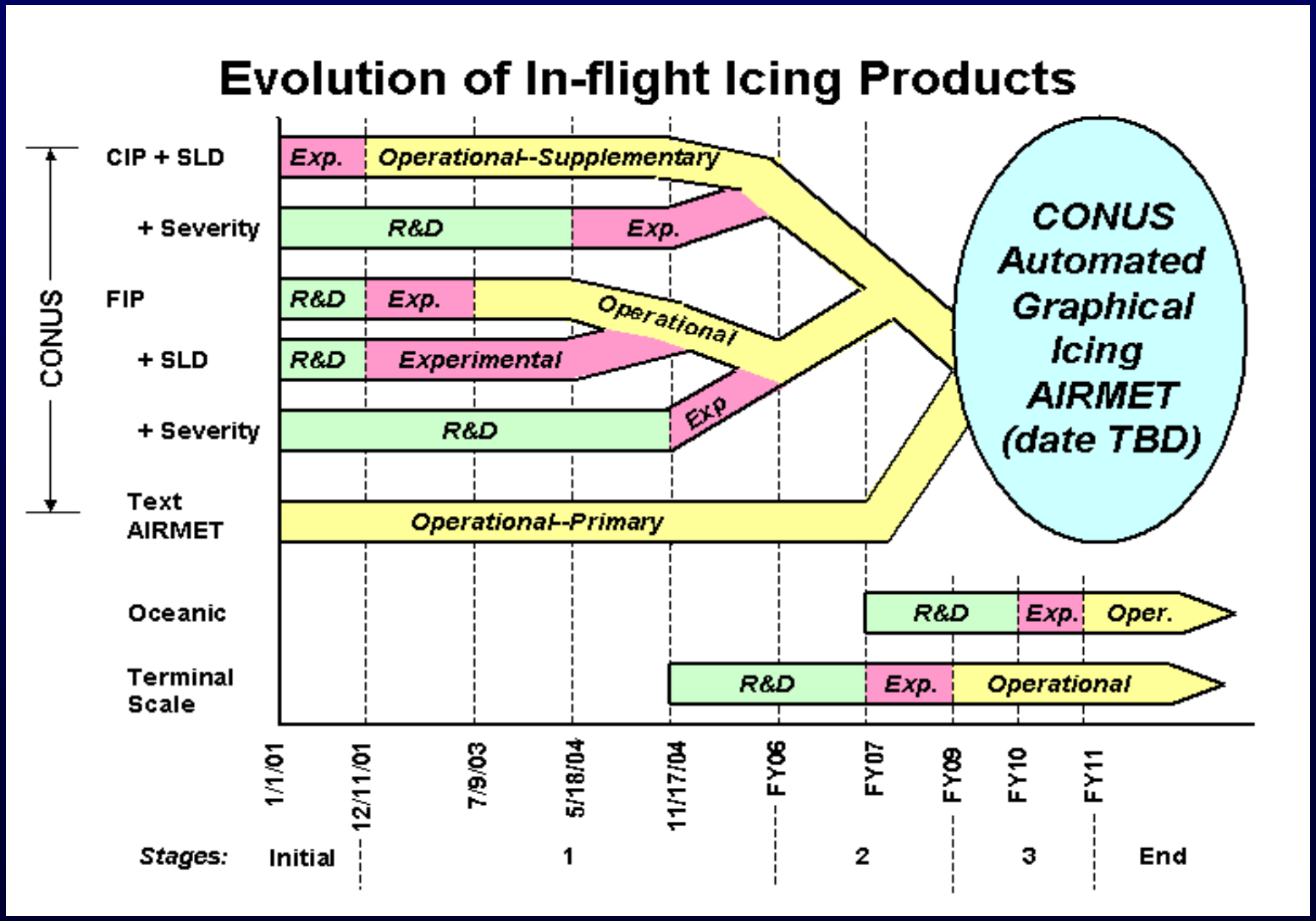
Thunderstorm Roadmap (Continued)



Thunderstorm Roadmap (Concluded)



In-Flight Icing Roadmap



Outlook

- Aviation Weather Roadmaps are under development
  - Five volumes have been drafted
  - Remaining volumes completed by end of the year
- Living documents
- User coordination is in process through quarterly user meetings

www.avmet.com (click on FAA Services)